

ABSTRACT OF THE DISCLOSURE

A catoptric projection optical system for projecting a reduced size of a pattern on an object 5 surface onto an image surface includes six mirrors that include a first convex mirror, a second mirror, a third mirror, a fourth mirror, a fifth mirror, and a sixth mirror in order of reflections of light, wherein the light incident upon the third mirror from the second 10 mirror intersects with the light incident upon the fifth mirror from the fourth mirror.